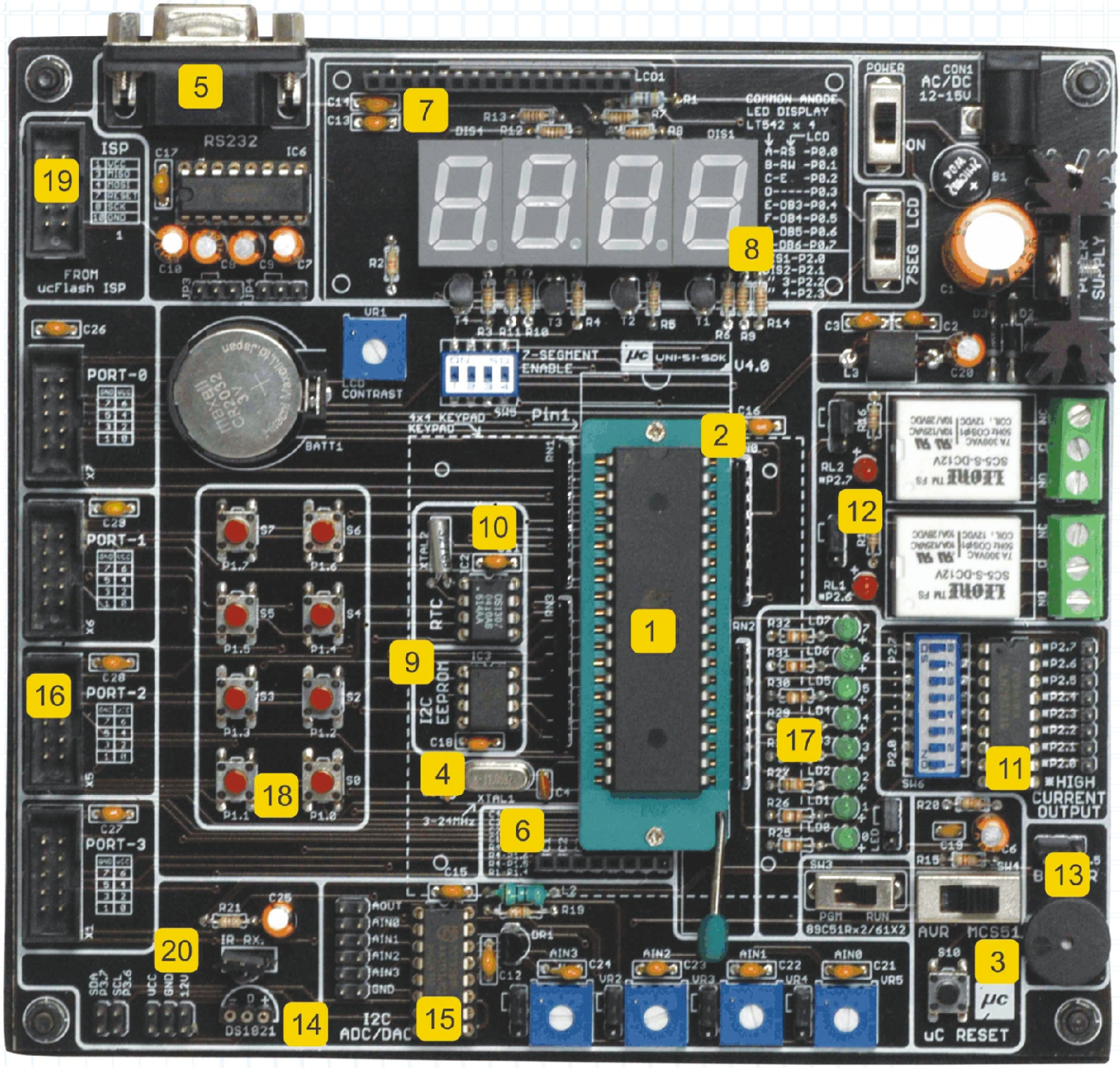
UNI-51-SDK

Entry level 89x51 [8051] / AVR Trainer Kit Software /
Hardware development platform
for 40-pin MCS51 and AVR family #

UNI-51-SDK allows you to have a well known and documented hardware both under electronic and software point of view. UNI-51-SDK is ideal for setting up a basic embedded lab enabling large number of students to study the concepts of embedded design and implement the same.



Product Features

1. Experimental board for 40-pin MCS51 and AVR family of microcontrollers
2. In-System Programming (ISP) facility for many microcontrollers. *
3. Double RESET signal with manual key
4. Crystal frequency: 11.0592MHz
5. On-board RS232 Compatible Serial Interface terminated in a 9-Pin 'D' female connector
6. 4x4 Matrix Keyboard

7. 16x2 Alphanumeric LCD connector (4-bit interface) and trimmer for contrast adjustment
8. Four 7-Segment CA LED Displays
9. I2C EEPROM (24Cxx)
10. Real Time Clock (DS1307) with Lithium battery and SRAM
11. 8-High current output port (500mA) for driving external loads
12. Two 12V Sugar Cube Relays
13. Continuous Tone Piezo Buzzer
14. Temperature sensor socket with thermostat functions (DS18S20) - Optional
15. Four 8-bit A/D converter one 8-bit D/A converter provided by PCF8591
16. All port-pins available on 10-pin box header
17. 8 LEDs for easy logic state monitoring
18. 8 Input Trigger Switches using 8 push buttons
19. ISP Programming with ucFlash ISP for AT89S51/52/8252/AVR* .....
20. Infrared remote control receiver module (free RC5 remote control included)

ucFlash ISP

Starting from simple experiments, it makes you grow in experience and complexity [with real life sample codes] to being able to deal with competence and master the fundamental elements which makes the microcontroller based electronics.

CD Contents

User Manual / Circuit Diagrams / Installable Software / Sample Programs / Useful Links

Sample Programs in Bascom & Hex

[1] LED Blinking
[2] 16 x 2 LCD Module
[3] Dancing LED's
[4] I2C EEPROM
[5] ADC
[6] RC5 – IR Remote Decoder
[7] Thermostat
[8] LCD + Keyboard + Buzzer
[9] Real Time Clock
[10] 4 x 7 Segment LED Display Driving.
[11] UNI_51_SDK_Test.hex [Pre-loaded to test]

Installable Software on CD

- Programmers Notepad : Free, open source, text editor
- ucFlash Programmer Software : ucFlash ISP Programmer software for 89SXX
- Bascom Basic Compiler : Demo Version
- MIDE-51- by Worapoht Kornkaewwattanakul : An IDE for MCS-51 microcontroller
- WinAVR : Open Source C Compiler for AVR

Specifications

- UNI-51-SDK dimensions : 150mm L x 170mm W x 30mm H
- Power supply : Input AC 100 to 240V, Output : DC 12V/500mA.
- Weight : 235 gms.

1 year limited warranty on ucFlash ISP programmer.

UNI-51-SDK Package Contents

- Standard package contains the following:
- UNI-51-SDK board
- AT89S52 & P89C61X2 IC's
- ucFlash ISP Programmer
- An AC adapter
- Installation software CD
- RC5 - IR Remote Handset
- Serial connecting cable
- Set of Jumpers
- 10 Pin FRC F – F Cable
- IR Receiver Module
- 4 x 4 Key Board
- 16 x 2 LCD Module

IC's supported by UNI-51-SDK#

Programming via :-

ucFlash ISP	Flash Magic
AT 89S51/52 *	P89C51RD2
AT89S8252	P89V51RD2
ATMEGA161/162/8515	P89C61X2BN *
AT90S8515/4414	* Included in the KIT

System Requirements

- The minimum requirements are as follows:
- A PC, IBM or compatible, desktop with one Serial port.
- Win98 SP2/NT/2000/ME/Xp
- CD-ROM driver
- Hard disk of at least 100MB of spare capacity